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S/N: 10/064,344

In the Claims

What is claimed is:

1. (Currently Amended) A fluid manifold for a combination welder and air compressor, said manifold comprising:

a unitary manifold block, said manifold block being elongated and having first and second ends;

a first fluid communication conduit system in said first end and a second fluid communication conduit system in said second end of said unitary manifold block, said unitary manifold block providing fluid isolation between said first fluid communication system and said second fluid communication system;

said first fluid communication system comprising a first main inlet port adapted to receive a first main flow of fluid, a first main outlet port for discharging that first main flow of fluid and a first main passageway within said unitary manifold block communicating between said first main inlet port and said first main outlet port, and at least one first auxiliary port formed in said unitary manifold block in unrestrictable flow communication with the first main flow of fluid passing between said first main inlet port and said first main outlet port; and

said second communication system comprising a second main inlet port adapted to receive a second main flow of fluid and a second main outlet port for discharging that second main flow of fluid, and at least one second auxiliary port formed in said unitary manifold block in unrestrictable flow communication with the second main flow of fluid passing between said second main inlet port and said second main outlet port.

2. (Original) A fluid manifold as defined in claim 1 wherein said at least one first auxiliary port comprises an auxiliary port formed in said unitary manifold block and oriented 90 degrees with respect to said first main inlet port.

3. (Original) A fluid manifold as defined in claim 2 wherein said first auxiliary port is a pipe thread fitting of a smaller diameter than said main outlet port.

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4. (Original) A fluid manifold as defined in claim 1 wherein said elongated unitary manifold block has a main longitudinal axis, and wherein said first main passageway is formed parallel to the main longitudinal axis of said unitary manifold block.

5. (Original) A fluid manifold as defined in claim 1 wherein said first main inlet port and first said main outlet port are formed in said unitary manifold block at approximately 90 degrees apart.

6. (Original) A fluid manifold as defined in claim 1 wherein said at least one first auxiliary port comprises an auxiliary port formed in said unitary manifold block at about 90 degrees to said main longitudinal axis of said unitary manifold block.

7. (Original) A fluid manifold as defined in claim 1 wherein said at least one first auxiliary port comprises first and a second auxiliary ports, each communicating with the first main flow of fluid passing between said first main inlet port and said first main outlet port, said second auxiliary port being parallel to the main longitudinal axis of said elongated unitary manifold block.

8. (Original) A fluid manifold as defined in claim 1 wherein said second main inlet port and said second main outlet port are coaxially formed in said unitary manifold block.

9-13. (Canceled)

14. (Currently Amended) A method of providing communication between a plurality of fluid conduits and auxiliary components and providing physical support for some of said auxiliary components in an air compressor system, said method comprising the steps of:

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providing a unitary manifold block having at least a first and a second fluid communication systems that are fluidly isolated from each other, each of systems having a main inlet port, a main outlet port and a main passageway communicating therbetween for passing a main flow of a fluid between said main inlet ports and said main outlet ports, and said unitary manifold block further having at least one auxiliary port communicating with first and second fluid communication systems;

connecting the plurality of fluid conduits to said at least first and said second fluid communication systems; and

connecting auxiliary components to said manifold in communication with one of said at least first and second fluid communication systems and providing physical support for said auxiliary components.

15. (Original) A method as defined in claim 14 wherein said step of connecting auxiliary components comprises connecting a safety relief valve to said manifold block to be in communication with said first fluid communication system.

16. (Original) A method as defined in claim 14 wherein said step of connecting auxiliary components comprises connecting a minimum pressure valve to said manifold block to be in communication with said second fluid communication system.

17. (Original) A method as defined in claim 14 wherein said step of providing a unitary manifold block comprises providing an elongated manifold block having a longitudinal axis and where the main passageway of said first fluid communication system is formed along said longitudinal axis.

18-22. (Canceled)

23. (New) A fluid manifold comprising:
a unitary manifold block, the manifold block being elongated and having first and second ends;

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a first fluid communication conduit system in the first end and a second fluid communication conduit system in the second end of the unitary manifold block, the unitary manifold block providing fluid isolation between the first fluid communication system and the second fluid communication system;

the first fluid communication system comprising a first main inlet port adapted to receive a first main flow of fluid, a first main outlet port for discharging that first main flow of fluid and a first main passageway within the unitary manifold block communicating between the first main inlet port and the first main outlet port, and at least two auxiliary ports formed in the unitary manifold block in communication with the first main flow of fluid passing between the first main inlet port and the first main outlet port, wherein one of the at least two auxiliary ports is positioned parallel to the main longitudinal axis of the unitary manifold block; and

the second communication system comprising a second main inlet port adapted to receive a second main flow of fluid and a second main outlet port for discharging that second main flow of fluid, and at least one auxiliary port formed in the unitary manifold block in communication with the second main flow of fluid passing between the second main inlet port and the second main outlet port.

24. (New) The manifold of claim 23 wherein the inlet ports and auxiliary ports have diameters, the diameters of the auxiliary ports being smaller than the diameters of the inlet ports.

25. (New) The manifold of claim 23 wherein one of the first and second main inlet ports, main outlet ports, and a connecting passage therebetween are coaxially formed in the unitary manifold block.

26. (New) The manifold of claim 23 wherein the first main inlet port and the second main inlet port are disposed parallel to one another.

27. (New) A system for providing fluid communication between a plurality of fluid conduits and fluid components, the system comprising:

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an elongated, unitary manifold block having a first end containing within a first fluid communication system and a second end containing within a second fluid communication system, the manifold block providing fluid isolation between the first and second fluid communication systems;

the first fluid communication system comprising a first main inlet port to receive a first main flow of fluid, a first main outlet port for discharging the first main flow of fluid, a first main passageway providing fluid communication between the first main inlet port and the first main outlet port, and at least one first auxiliary port in communication with the first main flow of fluid;

the second fluid communication system comprising a second main inlet port to receive a second main flow of fluid, a second main outlet port for discharging the second main flow of fluid, a second main passageway providing fluid communication between the second main inlet port and the second main outlet port, and at least one second auxiliary port in communication with the second main flow of fluid; and

wherin one of the first and second main inlet ports, main outlet ports, and a connecting passage therebetween are coaxially formed in the manifold block.

28. (New) The system of claim 27 further comprising at least three auxiliary ports in parallel alignment.

29. (New) The system of claim 28 further comprising a total of five auxiliary ports

30. (New) The system of claim 27 wherin the inlet ports and auxiliary ports have diameters, the diameters of the auxiliary ports being smaller than the diameters of the inlet ports.

31. (New) The system of claim 27 wherin the first main inlet and the second main inlet are positioned parallel to one another.

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32. (New) A fluid manifold comprising:

a manifold having formed therein two fluid communication systems and providing fluid isolation between the two fluid communication systems; and

wherein the two fluid communication systems each have a main inlet port, a main outlet port, a main passageway providing fluid communication between the main inlet and main outlet ports, and at least one auxiliary port in communication with the main flow of fluid and being of a smaller diameter than the main inlet port.

33. (New) The manifold of claim 32 further comprising at least three auxiliary ports in parallel alignment.

34. (New) The manifold of claim 32 further comprising a total of five auxiliary ports

35. (New) The manifold of claim 32 wherein the main inlet ports of the two fluid communication systems are positioned parallel to one another.

36. (New) The manifold of claim 32 wherein the main inlet port, main outlet port, and a connecting passage therebetween of one of the two fluid communication systems are coaxially formed in the manifold.

37. (New) A fluid communication apparatus comprising:

an elongated, unitary, fluid communication block having first and second ends, a plurality of fluid conduits therewithin, and providing fluid isolation between a first fluid communication system and a second fluid communication system;

the first fluid communication system disposed in the first end of the fluid communication block, and comprising a first main inlet port adapted to receive a first main flow of fluid and parallel to a second main inlet port, a first main outlet port for discharging the first main flow of fluid, a first main passageway within the unitary manifold block providing fluid communication between the first main inlet port and the

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first main outlet port, and at least one first auxiliary port formed in the fluid communication block in communication with the first main flow of fluid passing between the first main inlet and outlet ports; and

the second communication system disposed in the second end of the fluid communication block, and comprising a second main inlet port adapted to receive a second main flow of fluid and parallel to the first main inlet port, a second main outlet port for discharging the second main flow of fluid, a second main passageway within the fluid communication block providing fluid communication between the second main inlet port and the second main outlet port, and at least one second auxiliary port formed in the unitary manifold block in communication with the second main flow of fluid passing between the second main inlet and outlet ports

38. (New) The apparatus of claim 37 further comprising at least three auxiliary ports in parallel alignment.

39. (New) The apparatus of claim 37 further comprising a total of five auxiliary ports

40. (New) The system of claim 37 wherein the inlet ports and auxiliary ports have diameters, the diameters of the auxiliary ports being smaller than the diameters of the inlet ports.

41. (New) The apparatus of claim 37 wherein one of the first and second main inlet ports, main outlet ports, and a connecting passage therebetween are coaxially formed in the fluid communication block.

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